Before the
Federal Communications Commission
Washington DC, 20554

In the Matter of	)	
	)	
Connect America Fund	)	WC Docket No. 10-90
	)	
A National Broadband Plan for Our Future	)	GN Docket No. 09-51
	)	
Establishing Just and Reasonable Rates for Local Exchange Carriers	)	WC Docket No. 07-135
	)	
High-Cost Universal Service Support	)	WC Docket No. 05-337
	)	
Developing a Unified Intercarrier Compensation Regime	)	CC Docket No. 01-92
	)	
Federal-State Joint Board on Universal Service	)	CC Docket No. 96-45
	)	
Lifeline and Link-Up	)	WC Docket No. 03-109

COMMENTS OF PUBLIC KNOWLEDGE AND BENTON FOUNDATION

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August 24, 2011

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INTRODUCTION AND BACKGROUND

Public Knowledge (PK) and the Benton Foundation (Benton) file these comments in response to the Commission's request for targeted information in the USF/ICC Transformation Proceeding.[1]

Everyone should have access to high-speed broadband, no matter where they live. Like voice service and electricity, broadband has become a basic part of life, and rural Americans ought to have access to it along with everyone else. Most "universal" service reform plans, however, are not truly universal. They don't account for the last 2%—those areas that are most challenging to serve.

To understand why the last 2% is so challenging to serve, it is helpful to review why the other 98% is, by comparison, relatively easy to serve. The fundamental reasons are economies of scale, and uniformity. Suburbs and cities have high densities of people that allow a broadband provider to quickly recoup its infrastructure investment. In these areas, the marginal cost of serving an additional subscriber is low, making it easy for the carriers that serve them to grow large. These carriers get a further boost because cities and suburbs tend not to be located in challenging terrain—thus, they can use standard delivery platforms to serve many people over large areas. Consequently, much of the nation's population gets broadband from a relatively small number of providers. With subsidies like those

[1] Further Inquiry Into Certain Issues in the Universal Service/Intercarrier Compensation Transformation Proceeding, WC Docket Nos. 10-90, 07-135, 05-337, 03-109; CC Docket No. 01-92, 96-45, GN Docket No. 09-51, DA 11-1348 (rel. Aug. 3, 2011). The Benton Foundation is a nonprofit organization dedicated to promoting communication in the public interest. These comments reflect the institutional view of the Foundation and, unless obvious from the text, are not intended to reflect the views of individual Foundation officers, directors, or advisors.

available with traditional universal service, it is possible for medium-sized rural carriers to achieve many of the same results in some rural areas. The kinds of areas these carriers serve have population densities that are high when compared with their surroundings, and with some outside support it is possible to build a viable business serving them. Most of the Commission's thinking about universal service seems to relate to improving its support of rural towns and other population centers.[2]

But even if cities, suburbs, and most rural population centers were served, some areas would be left behind. These areas characteristically have very low population densities, which means that the marginal cost of serving an additional subscriber is high. They occupy diverse and often challenging terrain, such that methods that work in one rural area may not work in another. The lower return on investment means that outside carriers are generally not able to serve these markets, and the need to use tailored methods to provide service means that they may not have the expertise to do so, even if they wanted to.

The success of numerous small broadband providers that operate in rural markets, such as WISPs[3] and broadband community networks, demonstrates that it is possible to serve these kinds of areas with broadband and thrive while doing it. These providers adapt themselves to the conditions that outsiders find forbidding,

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[2] Of course, everything is not perfect in the markets these providers serve: the Commission must constrain the abuses that come with market power, and ensure that disadvantaged citizens have access to essential communications services. While issues remain regarding, for example, the process of upgrading copper wires to fiber, in general infrastructure per se is not the key problem with regard to broadband deployment in cities and suburbs.

[3] Illinois WISP Coverage, http://www.wirelesscowboys.com/?p=209.

using solutions that are tailored to local conditions. Different wired and wireless solutions are suited for different population, climate, and geographic situations. The kinds of services that are offered generally require motivated, expert, and empowered personnel, able to provide detailed customer service and deal with technical challenges. Large, bureaucratic carriers are unsuited to provide this kind of highly customized, hands-on service. Rather, small and nimble carriers do the job better. However, these small carriers are not everywhere, and not everybody has broadband.

It is a testament to rural self-reliance that so many broadband providers are able to set up shop and operate in difficult areas bypassed by national and regional operators. But many places are still without broadband, because tough barriers stand in the way of anyone who would want to provide service there. For example, a prospective broadband carrier may be unable to raise the capital needed to fund an initial build-out, because of the riskier nature of the investment. Or a prospective carrier may not be able to obtain reasonably priced backhaul, to connect its community to the Internet at large.

This is why, in their initial round of comments, PK/Benton recommended that the Commission take steps designed to boost community-based and local efforts. Specifically, the Commission should ensure that local providers are able to connect their communities to the rest of the Internet, and should make funds available to fund local broadband projects. These brief comments will provide further information on these proposals.

I. An Interconnection/Backhaul Requirement Combined with a Buildout Fund Could Jump-Start Community Broadband Efforts

Local actors are often the best suited to providing broadband in many communities, but various obstacles stand in their way. One of the biggest of is the unavailability of interconnection points with the rest of the Internet. A local wireless network or broadband coop is less useful if its users are unable to communicate with the Internet at large. The purpose of a "self-provisioning" requirement, therefore, is to ensure that when communities are willing and able to build out their own networks they are able to connect them up with the rest of the 'net.

There are two parts of the interconnection requirement. First, if a USF recipient's service area borders an underserved area, it should be required to interconnect with, and provide backhaul capacity to, networks in the underserved area. (See Figure 1.) Second, a recipient should provide the same interconnection with networks within the USF fund recipient's service area, that are located in areas where the fund recipient does not provide adequate service. (See Figure 2.) If a local network in one of these areas is willing to provide a higher level of service than the fund recipient itself, then the fund recipient ought to be required to assist it.

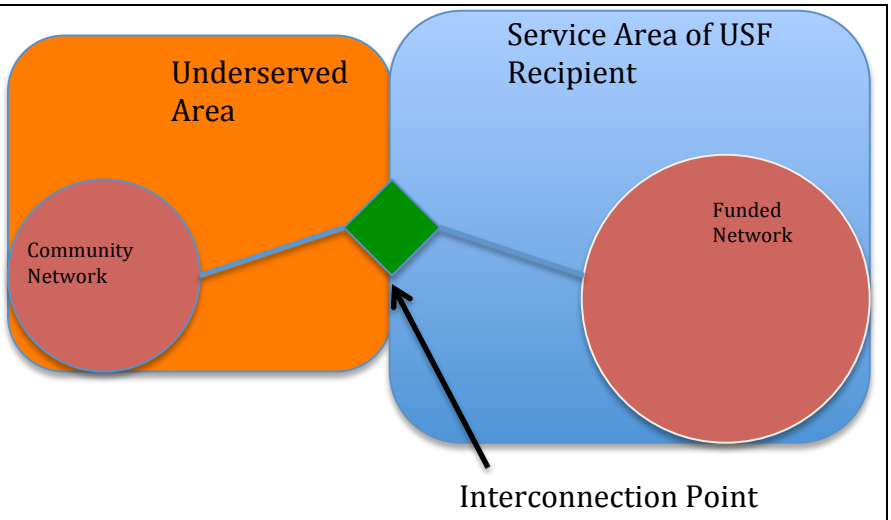

Figure 1. Service area borders underserved area.

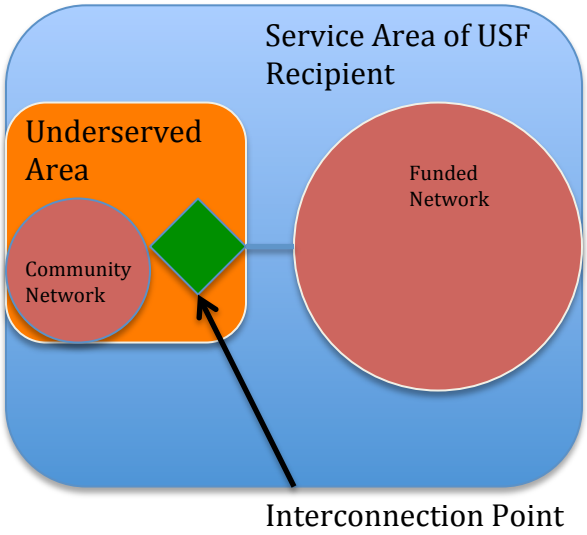

Figure 2. Service area contains underserved pockets.

A good model for how the Commission can structure this requirement is in the Computer III proceeding. There, the Commission developed a concept where some dominant carriers, if they wanted to provide "enhanced services," needed to demonstrate how they would provide equal access ("comparably efficient

interconnection," or CEI) to essential networking facilities to competing carriers, as they offer to themselves.[4] The Commission outlined a number of "equal access parameters" relating to different aspects of interconnection that carriers would have to provide, but allowed different carriers to satisfy them in different ways. While not all of these are directly applicable in this context, the core concepts are relevant. First, carriers ought to provide adequate interconnection facilities to self-provisioners, and second, carriers should demonstrate how they intend to meet their requirements upon application for universal service funding (rather than the Commission deciding every technical issue beforehand).

More specifically, a carrier should be prepared to offer a self-provisioner the same kinds facilities it would use, if the carrier itself were to provide service to the area the self-provisioner intends to cover. It can demonstrate that it meets this requirement by showing that it offers self-provisioners an interconnection point with (for example) similar interface functionality, technical characteristics, maintenance and repair schedules, end user access, transport costs, and availability as it uses internally.[5] This requirement of comparable treatment should cover not only the technical specifics of interconnection, but the location and nature of the interconnection point. Carriers should be prepared to deploy the same kind of infrastructure that is necessary to interconnect with a self-provisioner, as it would use to interconnect with the area the self-provisioner intends to cover, if it were providing service in that area. Carriers will be responsible for providing any new

[4] Bell Operating Companies Joint Petition for Waiver of Computer II Rules, 10 FCC Rcd. 13,758, ¶ 35 (1995) (Joint Petition).
[5] *Cf.* Joint Petition at ¶ 35.

infrastructure that is necessary for them to meet their requirement, and in the case of a self-provisioner that is located outside of the service area of the carrier, the carrier will be responsible for the cost of infrastructure that lies within its service area. In the latter case, the carrier would not be permitted to design its facilities so as to minimize its own costs—but neither would it be required to deviate from normal network engineering practices to minimize the costs to the self-provisioner.

A further barrier to broadband deployment in some underserved areas is a lack of funding needed for initial capital expenditures. The Commission could help overcome this by starting a pilot program to make funds available for community broadband projects, as a component of its overall USF reform. Previous programs suggest that making relatively small amounts of capital available to local communities for connectivity and Internet adoption can have a large, positive impact on those communities. For example, from 1994 to 2004, The National Telecommunications & Information Administration's Technology Opportunities Program (TOP) provided seed funding for over 610 projects.[6] This funding, administered by state, local, and tribal governments, health care providers, schools, libraries, police departments, and community-based non-profit organizations connected communities with the Internet. TOP recipients used funds to solve local problems with local solutions. Funding these types of locally-aware projects helps guarantee that the grants address real problems in real communities.

The current Broadband Technology Opportunities Program (BTOP) continues that tradition of empowering local communities. Among other programs,

[6] About TOP, http://www.ntia.doc.gov/legacy/otiahome/top/about.html.

BTOP funds the construction and extension of high-speed networks. This helps to bring true broadband connectivity to rural and other hard to reach areas. The Navajo National Middle/Last Mile project intends to offer broadband service to as many as 30,000 households living in a service area with "rugged terrain, significant poverty, and more than 60 percent of residents lack[ing] basic telephone service."[7] The REACH Michigan Middle Mile Collaborative has partnered with last mile providers to connect underserved counties in Michigan's Lower Peninsula region.[8] The Broadband Grant for Isolated Southeastern Oklahoma/Choctaw Nation project intends to build a last mile network that will connect up to 7,000 households and 75 businesses in underserved parts of Oklahoma and the Choctaw Nation.[9]

All of these projects use government seed money to bring local broadband networks to underserved areas. These networks are critical to creating the sustained economic growth that these areas need to survive in our rapidly changing economies. They enable incubators such as North Dakota's Traill County Technology Center, established in 1999 with the assistance of a TOP grant, to grow and thrive.[10] The Center now services as a critical IT incubator, creating opportunities for students at Mayville State University and residents of eastern North Dakota.

These projects, and many more like them, illustrate the untapped potential waiting in hard to serve parts of the United States. USF interconnection

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[7] Navajo Tribal Utility Authority Project Page, http://www2.ntia.doc.gov/grantees/NavajoTribalUtility.
[8] REACH Michigan Middle Mile Collaborative Project Page, http://www2.ntia.doc.gov/grantees/MeritNetwork.
[9] Broadband Grant for Isolated Southeastern Oklahoma/Choctaw Nation Project Page, http://www2.ntia.doc.gov/grantees/PineTelephone.
[10] Traill County Technology Center History, http://www.trailltechnology.org/?Page=aboutUs&Section=History.

requirements, and a small fund for infrastructure expenditures, are a reasonable and cost effective way to activate that potential.

II. The Commission Has the Legal Authority to Proceed With Community Broadband-Based USF Projects

The Commission envisioned taking steps to reduce the costs of backhaul and middle-mile connectivity in the NPRM.[11] It expressly sought "comment on whether to modify our universal service rules to provide additional support for middle mile costs," and PK/Benton's proposal that carriers provide interconnection facilities and backhaul capacity to willing providers in underserved areas is a logical outgrowth of that concept.[12] The Commission can rely on several sources of legal authority if it chooses to proceed. In the first place, it could always, by rule, simply require that *all* carriers, regardless of their participation in USF programs, provide this service. But for the purposes of this proceeding it is simpler to structure the requirement as a public interest obligation on fund recipients.[13] To the extent that any carrier wants to receive USF funding, it should demonstrate that it is willing and able to provide the interconnection and backhaul facilities described above. If a carrier objects to this requirement it can decline to apply for funds.

In the NPRM, the Commission also contemplated directing funds to non-ETCs. As with many Commission actions, there is not necessarily just one source of legal authority for it to do this. Indeed, the FCC has articulated several theories that would allow it to allocate funding to recipients other than traditional telephone

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[11] Connect America Fund, *Notice of Proposed Rulemaking & Further Notice Of Proposed Rulemaking*, 26 FCC Rcd. 4554, ¶ 395 (2011) (NPRM).
[12] See *Covad Commc'ns Co. v. FCC*, 450 F.3d 528, 548 (D.C. Cir.2006).
[13] The Commission has ample public interest authority to impose conditions of this kind. See 47 U.S.C. §§ 151, 154(i), 201-205, 214, 220, 254, 303(r).

companies.[14] For example, the Commission may have direct authority under Sections 254 to allow for such support, and it may have ancillary authority to allocate funds for broadband deployment. Section 706 provides a strong basis for support. As the Commission recognizes, Section 706 provides the Commission with tools "to take actions that encourage the deployment of 'advanced telecommunications capability.'" This broad (but "not unfettered")[15] Congressional grant of authority directs the Commission to "remove barriers to infrastructure investment." It directs the Commission to use various tools to accomplish this, including "regulatory forbearance, measures that promote competition in the local telecommunications market, [and] other regulating methods." It is plain that making funds available to potential broadband providers would remove the most significant barrier to infrastructure investment—lack of capital. Taking steps to bring broadband to new communities is the first step to creating competition among providers in those markets, and small-scale programs such as this one, designed to promote experimentation in the provision of broadband, are the kind of efforts that fall into the catchall "other regulating methods" category.

One of the strongest tools that Section 706 directs the Commission to use is regulatory forbearance. As the Commission recognized, it might simply "forbear from requiring that recipients of universal service support be designated as ETCs at all."[16] ETC requirements are quite far-reaching: to qualify, a carrier has to

> (1) provide a five-year plan showing how high-cost universal service support will be used to improve its coverage, service quality, or capacity in each wire

[14] *See* NPRM ¶¶ 55-74, 88, 318-19.
[15] *See* Preserving the Open Internet, Report & Order, 25 FCC Rcd 17905, ¶ 89 (2010).
[16] NPRM ¶ 89.

> center it seeks designation; (2) demonstrate its ability to remain functional in emergency situations; (3) demonstrate that it will satisfy consumer protection and service quality standards; (4) offer local usage plans comparable to those offered by the incumbent carrier in the areas for which it seeks designation; and (5) acknowledge that it may be required to provide equal access if all other ETCs in the designated service area relinquish their designations.[17]

While for many purposes ETC requirements ensure that funds are used effectively and in the public interest, these requirements can be overly burdensome for small, community-based broadband providers. The Commission should use its forbearance powers in just such cases as these—when applying the letter of the law would actually frustrate its purpose. The Commission has broad discretion to forbear from applying rules to communications providers when

> 1) enforcement of such regulation or provision is not necessary to ensure that the charges, practices, classifications, or regulations by, for, or in connection with that telecommunications carrier or telecommunications service are just and reasonable and are not unjustly or unreasonably discriminatory; (2) enforcement of such regulation or provision is not necessary for the protection of consumers; and (3) forbearance from applying such provision or regulation is consistent with the public interest.[18]

All of these conditions are met in this case—by removing ETC requirements for a small class of local providers, the Commission does not lose its ability to protect consumers or ensure fair behavior by carriers, and steps that bring broadband to places it otherwise would not be are certainly in the public interest. Forbearance in this case would enhance the public interest by promoting broadband in areas where it would otherwise be missing. In controlling the dispersal of funds,[19] the

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[17] ETC Requirements, http://www.usac.org/li/telecom/step02/become-eligible-fcc.aspx.
[18] 47 U.S.C. § 160.
[19] For this program, if the Commission does not allocate any funds until it has collected them, it avoids conflicts with the Anti-Deficiency Act.

Commission will still possess adequate means to assure that the public is protected and that the funds are used for their intended purpose.

CONCLUSION

As a component of its overall USF reform, the Commission should reduce the barriers that stand in the way of community broadband deployment. Specifically, it should require that USF recipients make facilities and backhaul available to allow underserved communities to provide their own broadband, and it should make a small fund available to enable initial infrastructure buildout by community broadband projects.

Respectfully submitted,

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August 24, 2011